

Claims:

1. A cooling system that cools down multiple different heat generators, said cooling system comprising:

5 multiple cooling circuits that adopt one identical heat exchange medium or multiple different heat exchange media to cool down the multiple different heat generators;

a heat exchange module that uses outside air to cool down the identical heat exchange medium or the multiple different heat exchange media of said multiple cooling circuits;

an outside air supply regulation module that regulates a supply of the outside air used by said heat exchange module to cool down the identical heat exchange medium or the multiple different heat exchange media; and

15 a control module that drives and controls said outside air supply regulation module in response to control signals input from said multiple cooling circuits in a normal state, while driving and controlling said outside air supply regulation module to increase the supply of the outside air in
20 an abnormal state where any abnormality arises in the control signals input from said multiple cooling circuits.

2. A cooling system in accordance with claim 1, wherein said control module drives and controls said outside air supply regulation module to supply the outside air at a maximum supply
25 capacity of said outside air supply regulation module in the

abnormal state.

3. A cooling system in accordance with claim 1, said cooling system further comprising:

5 temperature measurement units that respectively measure temperatures of the identical heat exchange medium or the multiple different heat exchange media used in said multiple cooling circuits,

 wherein the control signals input from said multiple
10 cooling circuits are based on the temperatures measured by said temperature measurement units.

4. A cooling system in accordance with claim 1, said cooling system further comprising:

15 working state detection units that respectively detect working states of said multiple different heat generators,

 wherein the control signals input from said multiple cooling circuits are based on the working states detected by said working state detection units.

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5. A cooling system in accordance with claim 1, wherein said outside air supply regulation module comprises a cooling fan.

25 6. A cooling system in accordance with claim 1, wherein the identical heat exchange medium or the multiple different

heat exchange media include at least one of water and a coolant.

7. A cooling system in accordance with claim 1, wherein said heat exchange module comprises a radiator.

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8. A cooling system in accordance with claim 1, wherein said multiple different heat generators include at least one of an internal combustion engine, a motor, a generator, and an inverter.

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9. A cooling system in accordance with claim 1, said cooling system further comprising:

a heat generator control unit that controls at least one of the multiple different heat generators,

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wherein said control module detects the abnormal state in the event of failed data transmission to and from said heat generator control unit or in the event of failed communication with said heat generator control unit.

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10. A motor vehicle with multiple different heat generators mounted thereon, said motor vehicle comprising:

multiple cooling circuits that adopt one identical heat exchange medium or multiple different heat exchange media to cool down the multiple different heat generators;

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a heat exchange module that uses outside air to cool down the identical heat exchange medium or the multiple different

heat exchange media of said multiple cooling circuits;

an outside air supply regulation module that regulates
a supply of the outside air used by said heat exchange module
to cool down the identical heat exchange medium or the multiple
5 different heat exchange media; and

a control module that drives and controls said outside
air supply regulation module in response to control signals
input from said multiple cooling circuits in a normal state,
while driving and controlling said outside air supply
10 regulation module to increase the supply of the outside air in
an abnormal state where any abnormality arises in the control
signals input from said multiple cooling circuits.

11. A motor vehicle in accordance with claim 9, wherein
15 said control module drives and controls said outside air supply
regulation module to supply the outside air at a maximum supply
capacity of said outside air supply regulation module in the
abnormal state.

20 12. A motor vehicle in accordance with claim 9, said motor
vehicle further comprising:

temperature measurement units that respectively measure
temperatures of the identical heat exchange medium or the
multiple different heat exchange media used in said multiple
25 cooling circuits,

wherein the control signals input from said multiple

cooling circuits are based on the temperatures measured by said temperature measurement units.

13. A motor vehicle in accordance with claim 9, said motor
5 vehicle further comprising:

working state detection units that respectively detect working states of said multiple different heat generators,

wherein the control signals input from said multiple cooling circuits are based on the working states detected by
10 said working state detection units.

14. A motor vehicle in accordance with claim 9, wherein said outside air supply regulation module comprises a cooling fan,

15 the identical heat exchange medium or the multiple different heat exchange media include at least one of water and a coolant, and

said heat exchange module comprises a radiator.

20 15. A motor vehicle in accordance with claim 9, wherein said multiple different heat generators include at least one of an internal combustion engine, a motor, a generator, and an inverter.

25 16. A motor vehicle in accordance with claim 9, said motor vehicle further comprising:

a heat generator control unit that controls at least one of the multiple different heat generators,

wherein said control module detects the abnormal state in the event of failed data transmission to and from said heat generator control unit or in the event of failed communication with said heat generator control unit.

17. A control method of a cooling system that cools down multiple different heat generators, said cooling system comprising: multiple cooling circuits that adopt one identical heat exchange medium or multiple different heat exchange media to cool down the multiple different heat generators; a heat exchange module that uses outside air to cool down the identical heat exchange medium or the multiple different heat exchange media of said multiple cooling circuits; and an outside air supply regulation module that regulates a supply of the outside air used by said heat exchange module to cool down the identical heat exchange medium or the multiple different heat exchange media, said control method comprising the step of:

driving and controlling said outside air supply regulation module in response to control signals input from said multiple cooling circuits in a normal state, while driving and controlling said outside air supply regulation module to increase the supply of the outside air in an abnormal state where any abnormality arises in the control signals input from said multiple cooling circuits.

18. A control method of a cooling system in accordance with claim 15, said control method comprising the step of:

driving and controlling said outside air supply
5 regulation module to supply the outside air at a maximum supply capacity of said outside air supply regulation module in the abnormal state.